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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,531	03/23/2004	Thomas L. Chenevert	UM-08780	3429

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EXAMINER	
MEHTA, PARIKHA SOLANKI	
ART UNIT	PAPER NUMBER
3737	
MAIL DATE	DELIVERY MODE
03/11/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,531	CHENEVERT ET AL.	
	Examiner	Art Unit	
	PARIKHA S. MEHTA	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 14 September 2007 have been fully considered but they are not persuasive. Namely, Applicant argues that the applied reference, Zhang et al (US Patent No. 6,147,492) "does not teach, suggest, enable and/or motivate the collection and processing of echoes (e.g., images) in magnitude format" (Remarks p. 5).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "processing of echoes in magnitude format") are not recited in the rejected claim(s). The present claims only limit the format in which the data is *collected*, not the format in which it is *processed*. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As Applicant's arguments and amendments are found to be wholly ineffective to overcome the prior art, the instant claims remain rejected in view of Zhang ('492) as presented herein.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02. The oath or declaration is defective because it does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to **patentability** as defined in 37 CFR 1.56.

Claim Objections

3. Claims 8 and 17 objected to because of the following informalities: the word "echos" appears where the word "echoes" should be used. Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-18 are directed toward systems comprising software. It has previously been held that a software program itself is merely a naturally occuring electromagnetic signal, and such natural phenomena are not patentable. Examiner respectfully suggests that claims 1-18 be amended to recite a software program embodied on a computer readable medium, for example, in order to render the claimed subject matter statutory. For further reference regarding the definition of statutory subject matter as set forth by the USPTO, Examiner directs Applicant's attention to the USPTO published Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility published on 26 October 2005.

6. Claims 19 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 19 and 20 are directed toward methods for generating a percentage of fat within a sample, the steps of which comprise the mere manipulation of electromagnetic signals. Such manipulation of electromagnetic signals has been previously held to constitute a judicial exception which may only be deemed statutory only if the claimed method(s) produce a useful, tangible and concrete result. The instant claims fail to produce such a useful, tangible and concrete result. Examiner suggests that Applicant amend the independent claims to include a step for displaying an output or treating a patient based on the outcome of the imaging steps in order to cure the statutory deficiencies of the instant application. For further reference regarding the definition of statutory subject matter as set forth by the USPTO, Examiner directs Applicant's attention to the USPTO published Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility published on 26 October 2005.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8, 10-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang et al (US Patent No. 6,147,492), hereinafter Zhang ('492).

Regarding claims 1-7, 10-6, 19 and 20, Zhang ('492) discloses an MRI method and system 11 adapted to receive in-phase and out-phase k-space/time-domain echoes ("magnitude format" data), further including a processor 19 adapted to calculate the percentage of fat in the imaged sample from the echo data (Fig. 1, col. 6 lines 60-67). The system of Zhang ('492) is capable of processing image samples from the human liver, abnormal tissue or lesions, and images obtained at low and high flip angles as claimed.

Regarding claims 8 and 17, Zhang ('492) discloses that the system is capable of correcting the T_2* NMR relaxation effect value (col. 17 lines 26-27).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 9 and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zhang ('492). Zhang ('492) teaches all features of the present invention as previously discussed for claims 8 and 18, but does not expressly teach that the T_2* NMR relaxation effect value is obtained by application of any of those equations recited in claims 9 and 19. However, claims 9 and 19 constitute mere product-by-process limitations on the relaxation effect value. It has previously been held that, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product (in the instant case, the T_2* NMR relaxation effect value) does not depend on its method of production; if the product is the same as or obvious over a product of the prior art, the claim is unpatentable even though the prior art was made by a different process (see for precedence *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985), *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113). Accordingly, although Zhang

('492) does not use the claimed equations to calculate the correct T2* relaxation effect value, the reference is still found to teach the value itself and therefore claims 9 and 19 are rendered obvious over the prior art.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PARIKHA S. MEHTA whose telephone number is (571)272-3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Parikha S Mehta/
Examiner, Art Unit 3737

/Brian L Casler/
Supervisory Patent Examiner, Art Unit 3737